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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/888,365	06/22/2001	Stephen DeOrnellas	TEGL-01092US1	8894

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EXAMINER
ALEJANDRO MULERO, LUZ L

ART UNIT	PAPER NUMBER
1763	8

DATE MAILED: 09/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/888,365	DEORNELLAS ET AL.	
	Examiner	Art Unit	
	Luz L. Alejandro	1763	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 June 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12-16,19,30,31 and 56-61* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-16,19,30,31 and 56-61* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *6* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Objections

Claim 14 is objected to because of the following informalities: in line 2, it appears that the word "and" should be replace with – to – for proper grammar. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in-
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 12-16, 19, 30-31, and 58-61 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 07-130712A.

The rejection is maintained as stated in the office action mailed 3-13-02 for the reasons of record. Furthermore, with respect to the limitation that heating the electrode results in any material deposited on the surface of the electrode forming a stable layer of material, note that the electrode in the application (see page 6, lines 1-6 of the

specification) and the electrode in the reference are heated at the same temperature so inherently the same results would be expected.

With respect to newly added claims 58-61, JP 07-130712A inherently contains these limitations because the electrode is heated to similar temperature as in applicant's invention and platinum is the material being etched, which would mean that inherently any gas collected on the surface would de-sorb from the surface and any gas collected on the surface boils off the surface because of the temperature to which the electrode is heated

Claims 12-16, 19, and 30-31 are rejected under 35 U.S.C. 102(e) as being anticipated by DeOrnellas et al., U.S. Patent 6,046,116.

The rejection is maintained as stated in the office action mailed 3-13-02 for the reasons of record. Additionally, again note that the electrode in the application and the electrode in the reference are heated at the same temperature so again inherently the same results would be expected.

Claims 58-59 are rejected under 35 U.S.C. 102(e) as being anticipated by Kugo et al., U.S. Patent 6,007,673 or Ohno et al., "Reactive Ion Etching of Copper Films in $SiCl_4$ and N_2 Mixture", Japanese Journal of Applied Physics, Vol. 28, No. 6, June 1989, pp. 1070-1072.

Kugo et al. shows the invention as claimed including etching a workpiece in the reactor chamber (see fig. 10 and col. 1-lines 5-60); and heating a surface of the

chamber surfaces using a heating element 106a, 106b during the etch such that etch materials deposited on the surface form a stable layer of material that does not flake off onto the workpiece.

Ohno et al. also discloses the invention as claimed including etching a workpiece in a reactor chamber with heated electrodes during the etch at temperatures such that inherently etch materials deposited on the surface form a stable layer of material that does not flake off onto the workpiece (see abstract and fig. 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07-130712A in view of Ohmi, U.S. Patent 5,272,417.

JP 07-130712A is applied as above but fails to expressly disclose applying power to the upper electrode. Ohmi discloses a RIE etching apparatus in which power is applied to the upper electrode 102 by a RF power supply 111 (see fig. 1A and col. 4-lines 3-40). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of JP '712 so as to have power applied to the upper electrode during processing of the substrate because this allows for processing without damage or contamination to the substrate (see col. 19-lines 4-10).

Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohno et al., "Reactive Ion Etching of Copper Films in $SiCl_4$ and N_2 Mixture", Japanese Journal of Applied Physics, Vol. 28, No. 6, June 1989, pp. 1070-1072 in view of Ohmi, U.S. Patent 5,272,417.

Ohno et al. is applied as above but does not expressly disclose applying power to the upper electrode. Ohmi discloses a RIE etching apparatus in which power is applied to the upper electrode 102 by a RF power supply 111 (see fig. 1A and col. 4-lines 3-40). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of JP '712 so as to have power applied to the upper electrode during processing of the substrate because

this allows for processing without damage or contamination to the substrate (see col. 19-lines 4-10).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 12-16, 19, and 30-31 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-37 of U.S. Patent No. 6,046,116. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the reasons of record noted in the office action mailed 3-13-02.

Response to Arguments

Applicant's arguments filed 6-13-02 have been fully considered but they are not persuasive. Applicant argues that Keizo does not anticipate claim 12. However, as the examiner has mentioned above, claim 12 is inherently anticipated by Keizo. With

respect to DeOrnellas, it is irrelevant that the inventions are commonly owned because the rejection is made under 102(e). The pertinent section cited by applicant only applies to rejections made under 35 USC 103. Therefore, both of the above rejections have been maintained.

With respect to the rejection under obviousness-type double patenting of claims 12-16, 19, and 30-31, note that the claims stated above do not specify flaking off of the material and therefore this argument is not persuasive. Claims which contain the limitation about flaking off of the material have not been included in the double patenting rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luz L. Alejandro whose telephone number is 305-4545. The examiner can normally be reached on Monday-Thursday from 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills, can be reached on 308-1633. The fax phone numbers for the organization where this application or proceeding is assigned are 872-9310 for regular communications and 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0661.

LLAM
September 8, 2002

GREGORY MILLS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700